

-2-

- (A) at least one hydrolyzable aluminium compound and
- (B) at least one hydrolyzable organosilicon compound
- (a) are hydrolyzed jointly or separately from each other in space or time at from 50 to 98°C,
- (b) during or after the hydrolysis the reaction products are jointly subjected to hydrothermal ageing in an aqueous or aqueous-acidic environment at temperatures of from 80 to 220°C for a period of greater than 0.5 hour, and
- (c) wherein the aluminium compound/organosilicon compound ratio used is from 99.5 wt. %:0.5 wt. % to 50 wt. %:50 wt. %, each referring to  $\text{Al}_2\text{O}_3:\text{SiO}_2$ .

B2 23. (New) A process according to claim 22, characterised in that the hydrolyzable compounds of claim 22 are compounds of the type  $\text{M}(\text{O}-\text{R}-\text{A}-\text{R}')_{z-n} (\text{O}-\text{R}'')_n$ , wherein independent from each other

- M is an aluminium or silicon,
- R'' is a hydrocarbon residue having 1 to 30 carbon atoms,
- R' is a hydrocarbon residue having 1 to 10 carbon atoms,
- R is a bivalent hydrocarbon residue having 1 to 10 carbon atoms, and
- A represents a heteroatom of the main group 6 (oxygen group) or the main group 5 (nitrogen group) of the periodic system wherein, if A represents an element of the main group 5, A bears hydrogen or a  $\text{C}_1$  to  $\text{C}_{10}$  alkyl residue or a  $\text{C}_6$  to  $\text{C}_{10}$  aryl/alkyl aryl residue as additional substituents for the saturation of its valences, and
- n is an index for the numbers 0, 1, 2, or 3 if M is aluminium, or is an index for the numbers 0, 1, 2, 3, or 4 if M is silicon, and
- z is an index for the number 3 if M is aluminium, or is an index for the number

-3-

4 if M is silicon.

24. (New) A process according to claim 23, characterized in that n is equal to 0.
25. (New) A process according to claim 23, characterised in that n is equal to 3 if M is aluminium and/or n is equal to 4, if M is silicon.
26. (New) A process according to any one of claims 22, 23 or 25, characterised in that silicon alcoholates having C<sub>1</sub> to C<sub>8</sub> hydrocarbon residues are used as hydrolyzable silicon compounds.
27. (New) A process according to any one of claims 22, 23 or 25, characterised in that prior to addition of the hydrolyzable aluminium compound, the hydrolyzable silicon compound is prehydrolyzed with water or dilute acid using 0.5 to 3 moles of water per mole of silicon, namely, less than the stiochiometric amount.
- B2 28. (New) A process according to any one of claims 22, 23 or 25, characterized in that aluminium alcoholates having C<sub>2</sub> to C<sub>12</sub> hydrocarbon residues are used as hydrolyzable aluminium compounds.
29. (New) A process according to any one of Claims 22, 23 or 25, characterised in that the hydrolysis is performed at 50 to 98°C.
30. (New) A process according to any one of claims 22, 23 or 25, characterised in that the hydrothermal ageing is conducted for a period of 0.5 hour to 24 hours.
31. (New) A process according to any one of claims 22, 23 or 25, characterised in that the acid is added after the hydrolysis and prior to hydrothermal treatment. ✓
32. (New) A process according to any one of claims 22, 23 or 25, characterised in that the acid which is present during or after the hydrolysis is a monovalent organic C<sub>1</sub> to C<sub>6</sub> acid or a monovalent mineral acid.

-4-

33. (New) A process according to any one of claims 22, 23 or 25, characterised in that the hydrolyzable metal compounds are purified prior to use by distillation, filtration, or centrifugation and/or are liberated from metal ions by ion exchange.

34. (New) A process according to any one of claims 22, 23 or 25, characterised in that the reaction product of the invention is calcined at temperatures of from 550°C and 1500°C for a period of 0.5 hour to 24 hours.

35. (New) Alumino-silicates dispersible in aqueous or aqueous/alcoholic media, optionally in the presence of acid, characterised in that the alumino-silicate is manufactured according to any one of the processes defined in claims 22, 23 or 25, and prior to dispersion in the aqueous or aqueous/alcoholic medium is present in a dried, essentially anhydrous state.

B2 36. (New) A process according to claim 28 wherein the aluminum alcoholates have from C<sub>4</sub> to C<sub>8</sub> hydrocarbon residues.

37. (New) A process according to claim 28 wherein the aluminium alcoholates have saturated C<sub>6</sub> to C<sub>8</sub> hydrocarbon residues.

38. (New) A process according to claim 29 wherein the hydrolysis is performed at a temperature of from 85 to 90°C.

39. (New) A process according to claim 30 wherein the hydrothermal aging is conducted for a period of from 1 to 20 hours.

40. (New) A process according to claim 26 wherein the silicon alcoholates have C<sub>2</sub> to C<sub>4</sub> hydrocarbon residues.

41. (New) A process according to claim 26 wherein the hydrocarbon residues are saturated.